Survey123 and Field Tools

Presented by Linda Davis

January, 2018

Field tools

- Benefits of mobile collection applications
- The tools used
- Applications
- Requirements
- Challenges and lessons learned

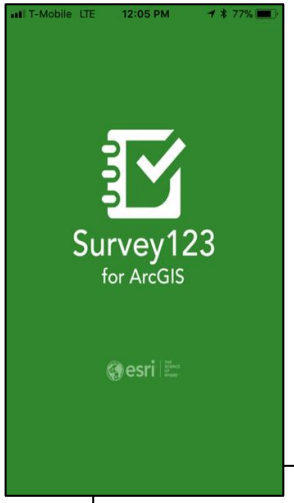
Benefits

- Processes that were done with paper and pencil can be assisted or streamlined with field tools carried on phones or tablets.
- Easy access to data
- Stored in the cloud
- Allows people to use ‘phone or device tools’
- Increases accuracy / completeness of data gathered

Collecting Data in the Field

- **Survey 123**
- Form centric
- Quick to deploy surveys that allow point data collection

- **Collector**
- GIS centric
- Good for collecting spatial data. Points, Lines and Polygons.



Examples

1. Eastern Snake Plain Aquifer Monitoring
2. Flow Meter Inventory in Water Districts
3. Water Measurement Information Gathering
4. IDWR Transaction Monitoring
5. Beneficial Use Exams

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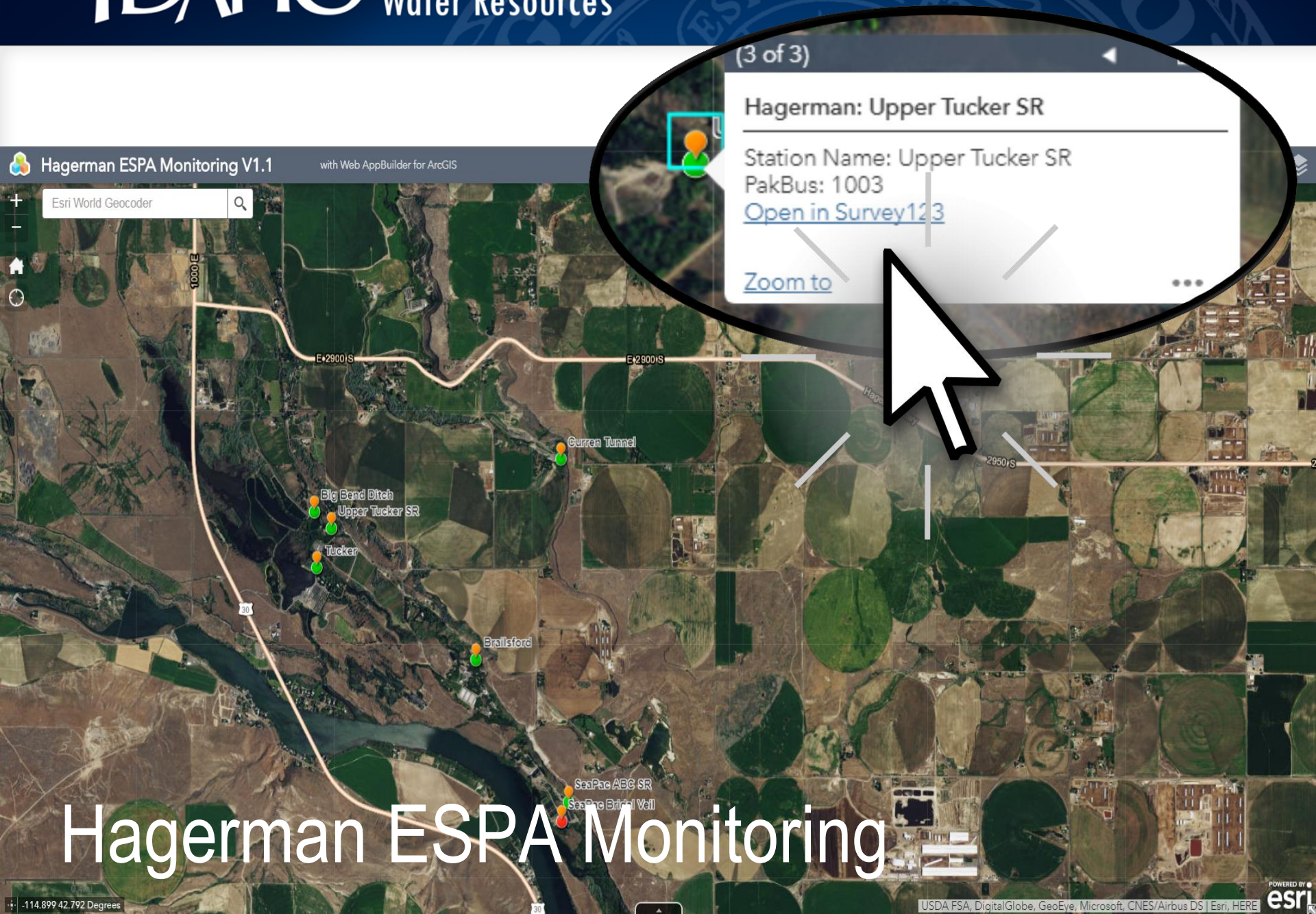

Hagerman ESPA Monitoring

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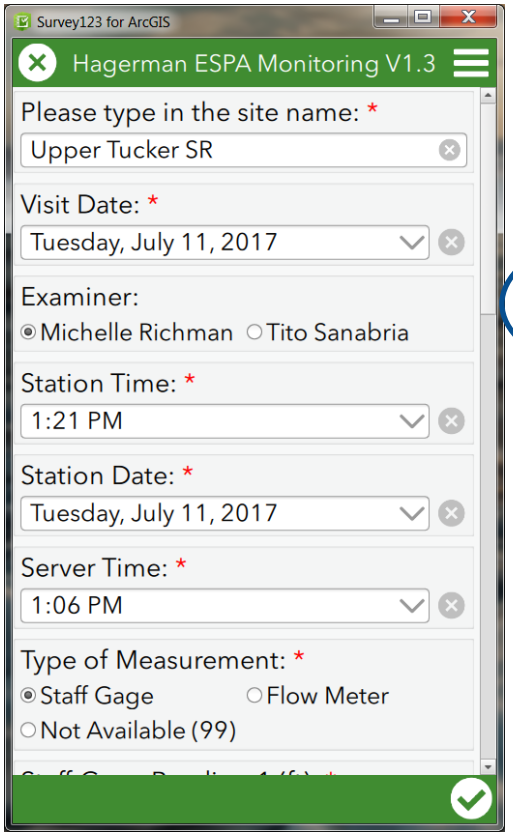
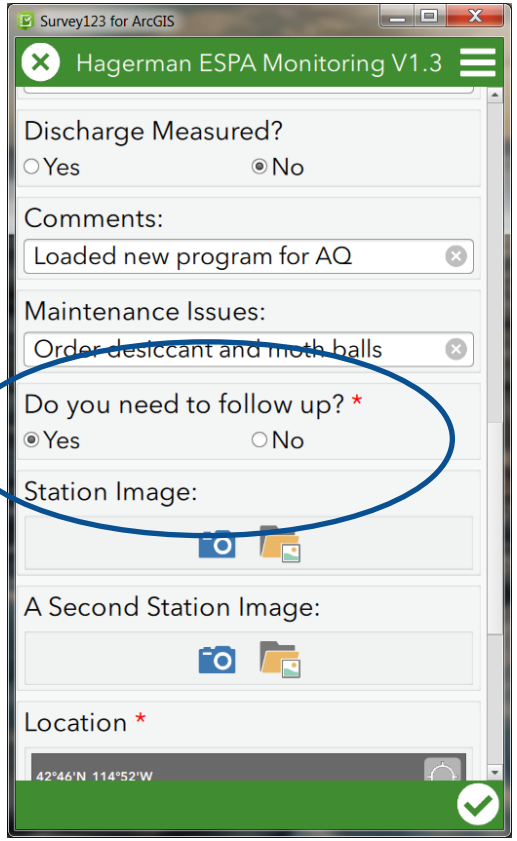
Hagerman ESPA Monitoring





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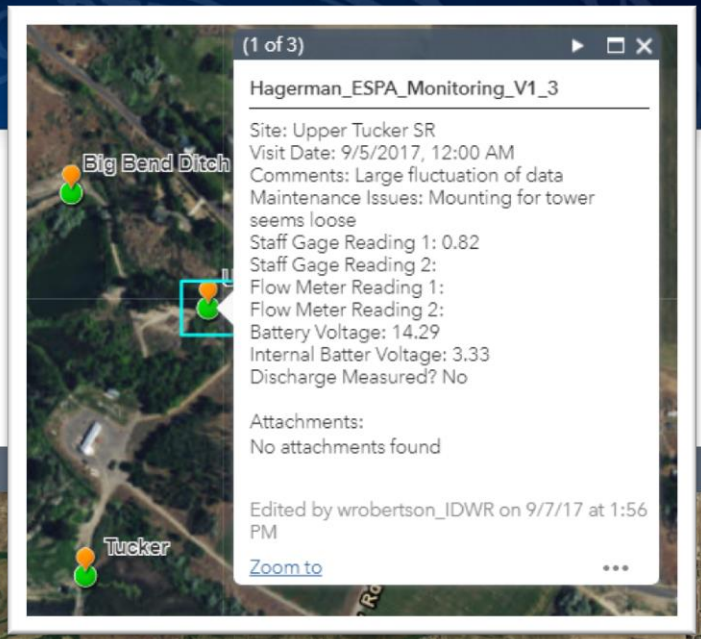
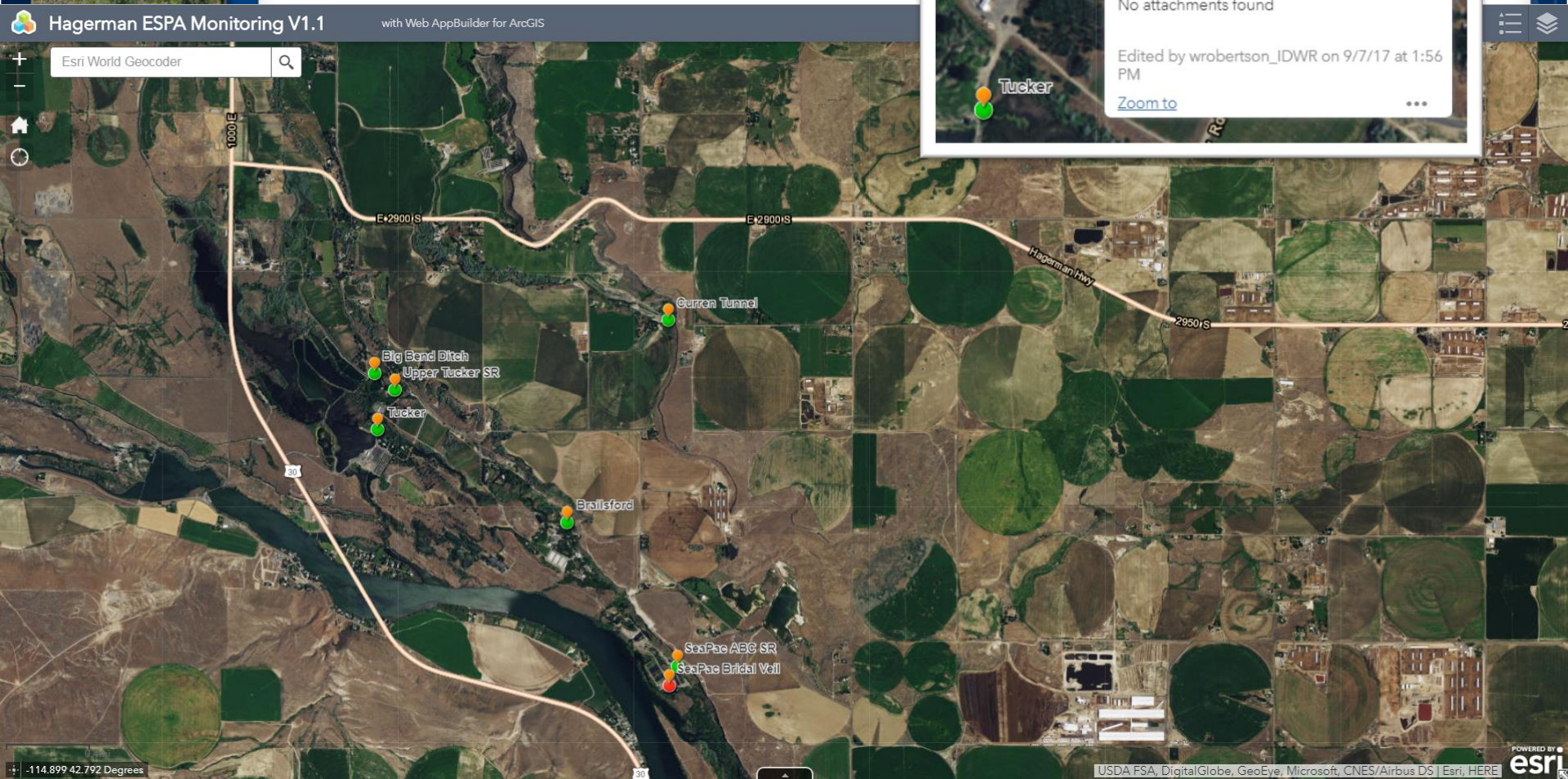
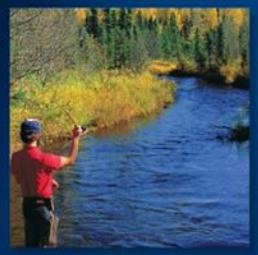
Need follow up?

- Yes
- No





Beneficial Use Exams

Need to record:

1. Basic Information
2. Points of Diversion
3. Place of Use

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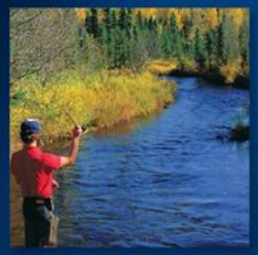
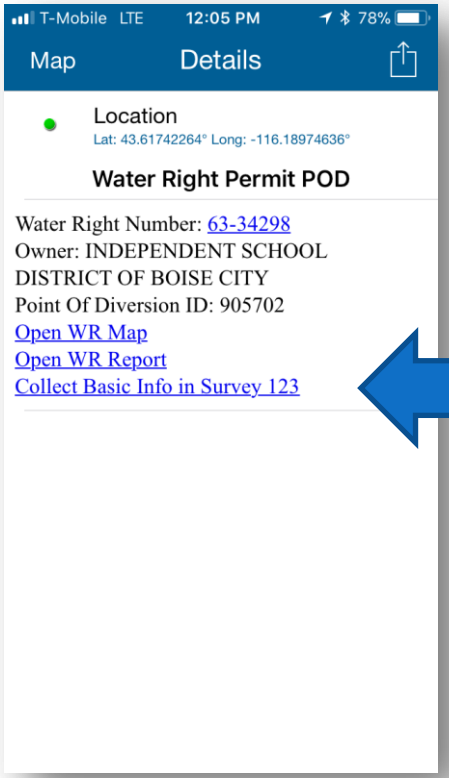
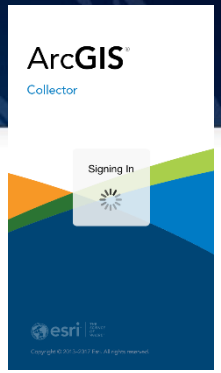


Beneficial Use Exams

Places with a Permit





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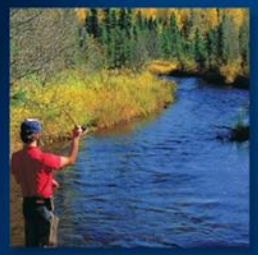

Water Measurement Information System

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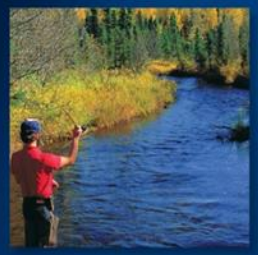

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WMIS
Water Management Information System

Quick Search:

Search Method: WMIS Number

WMIS Number: 1002495

Search

Point Of Diversion | PCC | Flow Meter | Time Clock | Alternate | Contacts | Data Summary | O

Flow Meter Calibrations

You are viewing 1002495; A0013327

Click here to close insert panel.

Calibration Date/Time:*		**Factor:**	
Installed Meter Data:		**Standard Meter Data:**	
Installed Meter Flow:		**Standard Meter Flow:**	
Rate Unit*:	--Required--	**Rate Unit:**	GPM
Rate Multiplier*:	--Required--	**Pipe Material:**	--None--
Volume Multiplier*:	--Required--	**Outside Diameter (inches):**	
Volume Unit*:	--Required--	**Wall Thickness (inches):**	
Location:	--None--	**Downstream Distance (feet):**	
Comments:		**Upstream Distance (feet):**	

Survey123 for ArcGIS

My Survey

Inspection Date: Tuesday, July 11, 2017

WMIS #: 1000059

Metal Tag #: A0016372

Owner/Operator: US DEPT OF INTERIOR

Reporting District: Water District 110

Flow Meter Manufacturer *: Sparling

Model Specifications *: Tigermag FM-656 (Flanged)

Flow Meter Type *

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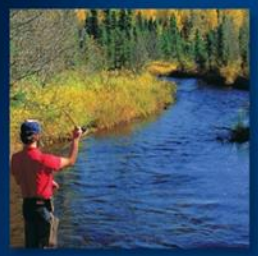


Requirements

1. Create Survey
2. Launch Survey
3. Do Survey
4. Process Results

Windows x86 — Size: 84 MB

macOS — Size: 154 MB

Linux — Size: 132 MB

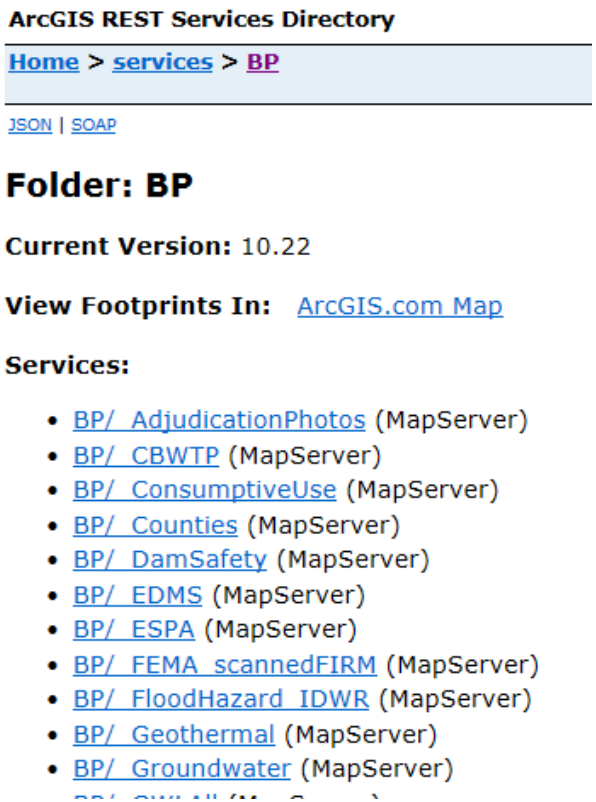
Download on the App Store | GET IT ON Google Play | Available at amazon | Get it from Microsoft

- **Collecting data:**
  - Personal mobile device/IDWR device

IDWR

Using Map Services

- https://maps.idwr.idaho.gov/arcgis/rest/services/BP



ArcGIS REST Services Directory

Home > services > BP

JSON | SOAP

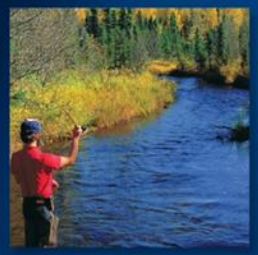
Folder: BP

Current Version: 10.22

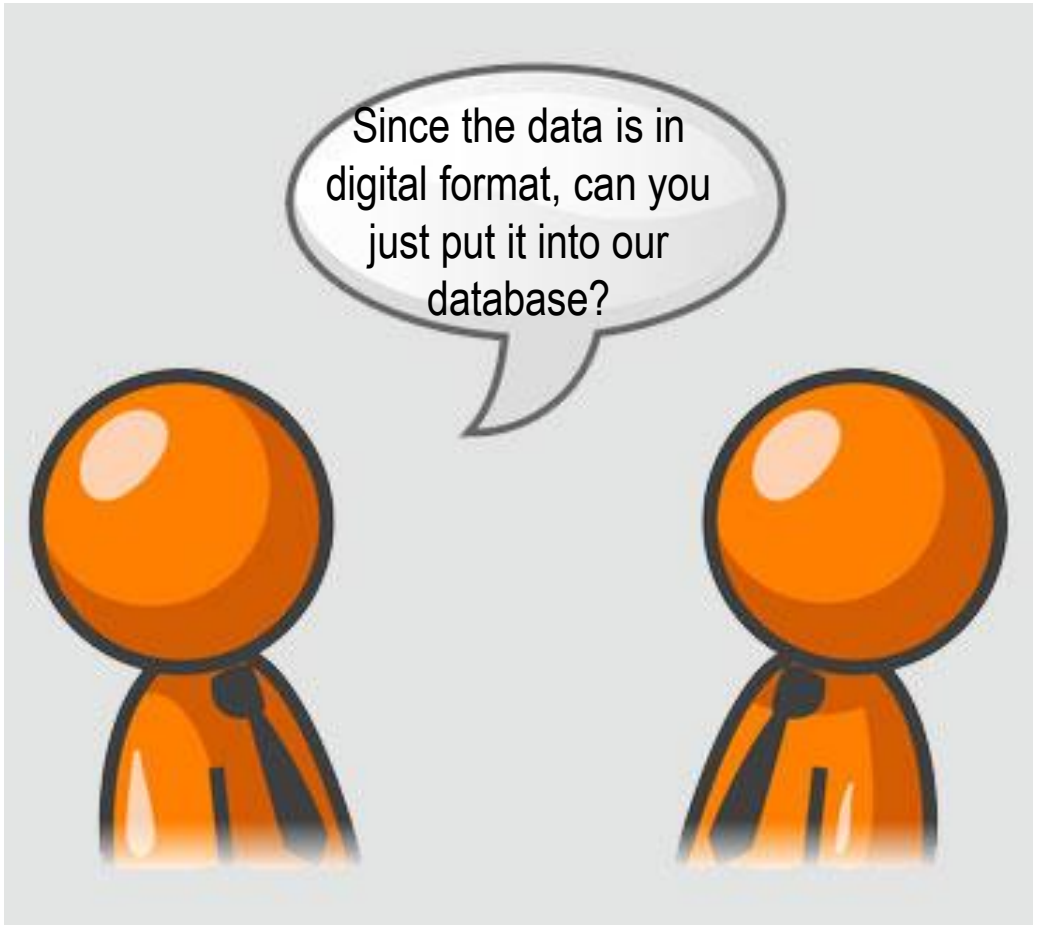
View Footprints In: ArcGIS.com Map

Services:

- BP/_AdjudicationPhotos (MapServer)
- BP/_CBWTP (MapServer)
- BP/_ConsumptiveUse (MapServer)
- BP/_Counties (MapServer)
- BP/_DamSafety (MapServer)
- BP/_EDMS (MapServer)
- BP/_ESPA (MapServer)
- BP/_FEMA_scannedFIRM (MapServer)
- BP/_FloodHazard_IDWR (MapServer)
- BP/_Geothermal (MapServer)
- BP/_Groundwater (MapServer)

Lessons learned



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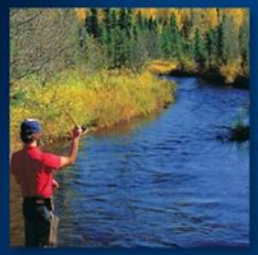
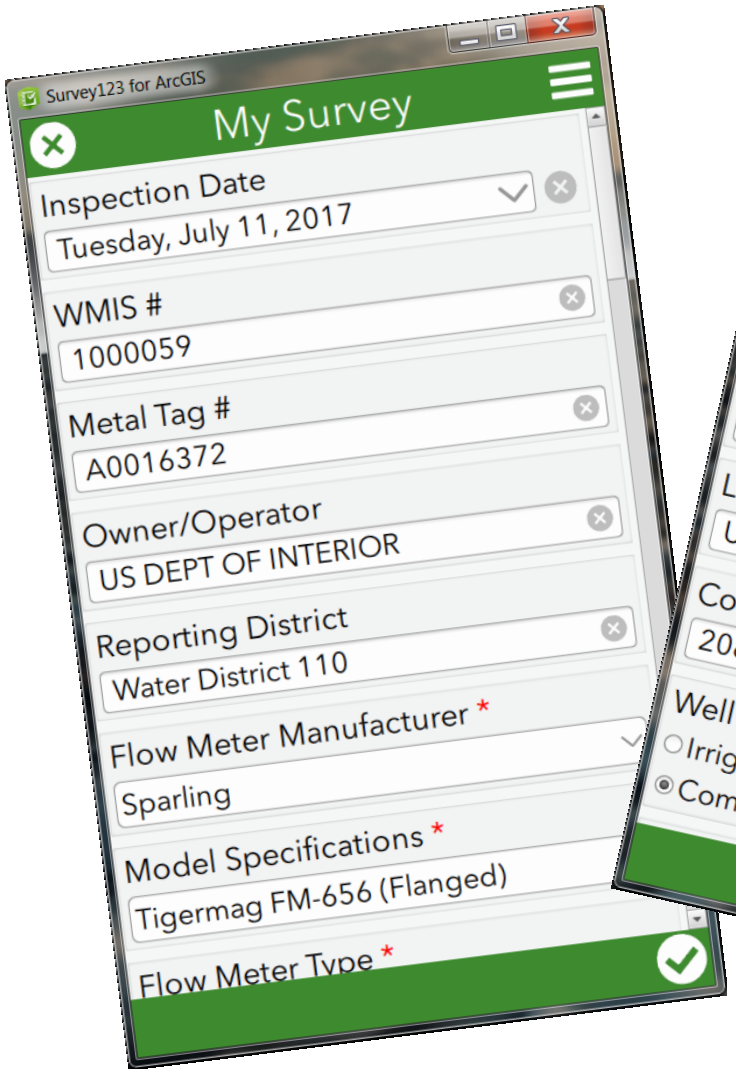
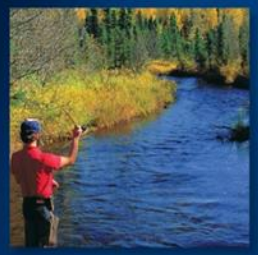
Standardization

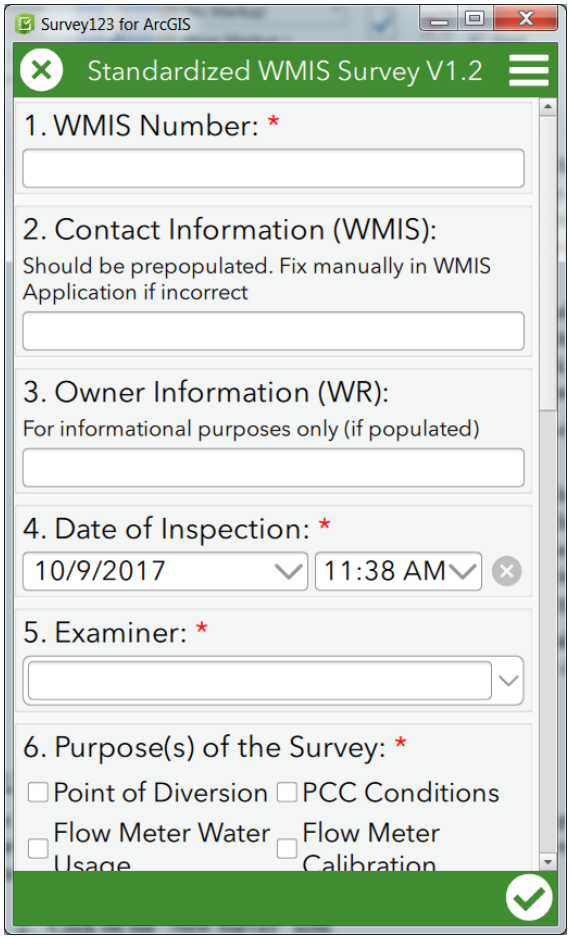


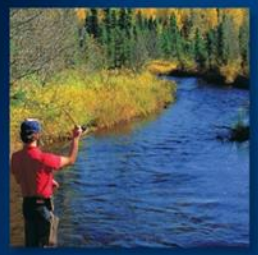




Standardized Survey

- Everything related to WMIS in one place
- Designed with database in mind: match items on drop-down list, set required items, match data types, *etc.*



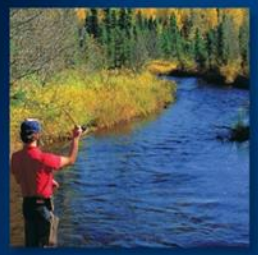



Current Process

Collect data in the field

WMIS Application

Various tables inside WaterMeasures Database

Our first idea

Collect data with Survey 123

CSV Table

SSIS

Various tables inside WaterMeasures Database

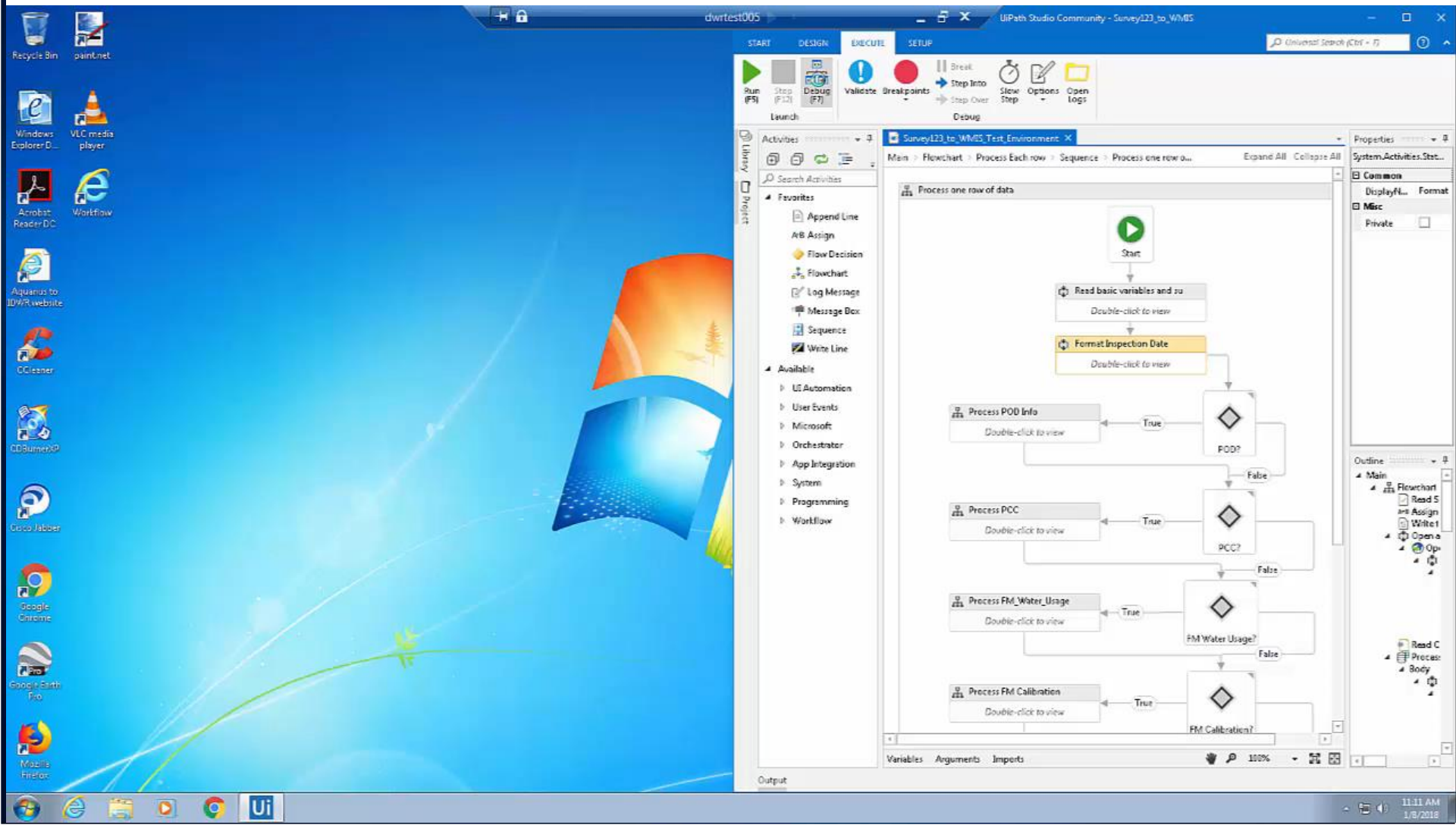
Collect data in the field

WMIS Application

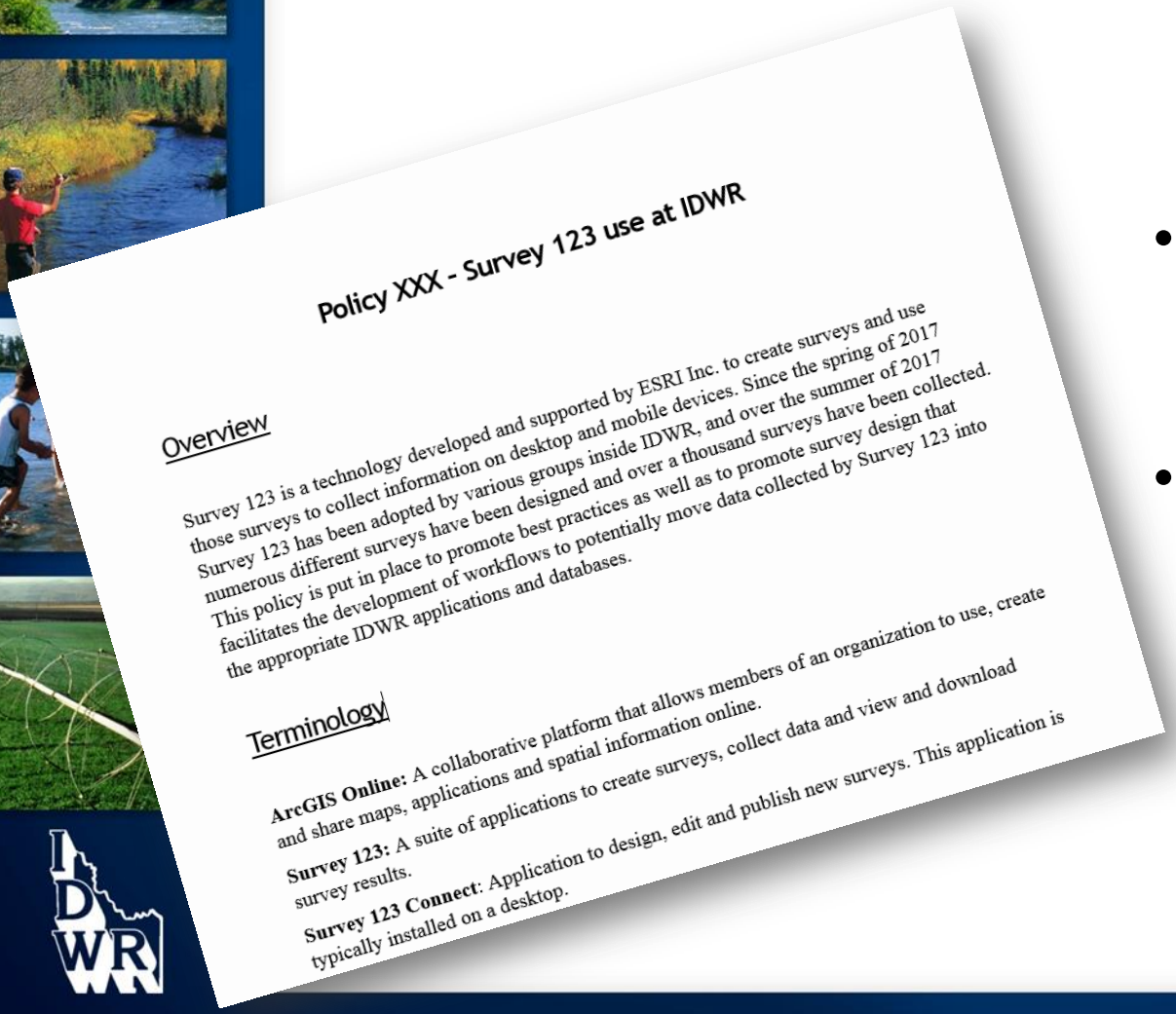
Various tables inside WaterMeasures Database

Problem:
what does WMIS do?

Our second idea: Use Robotic Process Automation



User Group and Policy



Policy XXX - Survey 123 use at IDWR

Overview

Survey 123 is a technology developed and supported by ESRI Inc. to create surveys and use those surveys to collect information on desktop and mobile devices. Since the spring of 2017 Survey 123 has been adopted by various groups inside IDWR, and over the summer of 2017 numerous different surveys have been designed and over a thousand surveys have been collected. This policy is put in place to promote best practices as well as to promote survey design that facilitates the development of workflows to potentially move data collected by Survey 123 into the appropriate IDWR applications and databases.

Terminology

ArcGIS Online: A collaborative platform that allows members of an organization to use, create and share maps, applications and spatial information online.

Survey 123: A suite of applications to create surveys, collect data and view and download survey results.

Survey 123 Connect: Application to design, edit and publish new surveys. This application is typically installed on a desktop.

- Meetings to determine standard for large collection efforts
- Realization we need an IDWR policy to “govern” field tools

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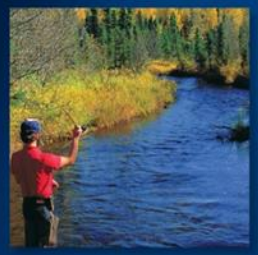
Lessons Learned



- **Designing a survey:**
  - Involve GIS and IT department *early*
  - Use standardized survey
  - Keep destination database in mind
  - Include field staff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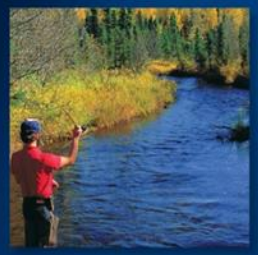
Standardized WMIS Survey V1.2

- **Utilize existing services**
  - Use existing web services.
  - Model data flow
  - Bring in other tools to ‘fill the gap’

- **Policy for tools:**
  - User group
  - Governance policy

- **Other:**
  - Clean up after yourself
  - Use thumbnails

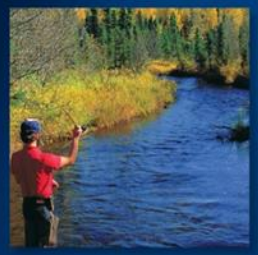
IDWR

Next Steps




- Incorporate mobile benefits into new applications
- Expand tools for internal and external customers



Comments or Questions?

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